

REMARKS

Claims 1-17 are pending in the application. The status of the application is as follows:

Claims / Section	35 U.S.C. Sec.	References / Notes
1-12 & 15-17	§103(a) Obviousness	<ul style="list-style-type: none">• Garvey, et al. (U.S. Patent No. 6,286,764); and• Berger, et al. (U.S. Patent No. 6,785,599).
13	§103(a) Obviousness	<ul style="list-style-type: none">• Garvey, et al. (U.S. Patent No. 6,286,764);• Berger, et al. (U.S. Patent No. 6,785,599); and• Rosenberg (U.S. Patent No. 6,300,937).
14	§103(a) Obviousness	<ul style="list-style-type: none">• Garvey, et al. (U.S. Patent No. 6,286,764);• Berger, et al. (U.S. Patent No. 6,785,599); and• Scheideler (U.S. Pub. No. 2003/0188583).

5 Applicants have amended claims 1, 7-10, 13, 14 and 17 in order to more specifically claim the inventive features, and have cancelled claims 11 and 12. Applicants thank the Examiner for the non-finality of the last office action and the removal of the previous bases for objection and rejection. Applicants have further provided claims 18 and 19 for consideration.

10 Applicants' use of reference characters below is for illustrative purposes only and is not intended to be limiting in nature unless explicitly indicated.

**35 U.S.C. §103(a), CLAIMS 1-12 AND 15-17 OBVIOUSNESS OVER GARVEY IN VIEW OF
BERGER**

1. *Garvey fails to teach the element of detecting, via a measurement device, measurement signals that indicate the partial movement of the control element from the initial condition, and Berger fails to teach detecting a measurement signal that indicates the partial movement of the control element, but rather teaches detecting partial movement of the actuator which would not be acceptable in the operational safety context of the present invention, with claims as amended.*

In the previous office action, the Examiner had utilized Garvey as an anticipating reference for these claims. In the present OA, the Examiner has added the Berger reference and rejected these claims under an obviousness standard based on the combination of Garvey and Berger. The Berger reference was added because, as stated by the Examiner on p. 3, top carryover paragraph:

[Garvey] does not teach controlling the actuator dependent on the control signal aided by the control unit to operate the actuator for the partial movement of the control element from the initial condition or detecting, via a measurement device, measurement signals that indicate the partial movement of the control element from the initial condition.

The Examiner then discussed the teaching of Berger, noting:

Berger teaches controlling the actuator dependent on the control signal aided by the control unit to operate the actuator for the partial movement of the control element from the initial condition (see Berger, column 15, lines 15-30); and detecting, via a measurement device, measurement signals that indicate the partial movement of the control element from the initial condition (see Berger, column 15 lines 31-44).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify

5 Garvey to include the teachings of Berger because having a controller and a measurement device would have allowed the skilled artisan to supply control signals in accordance with a predetermined characteristic (see Berger, column 3 lines 42-51) and detect movement in the positions of components (see Berger, column 3 lines 64-67).

Applicants have amended the independent claims to more distinctly claim the invention. However, Applicants respectfully disagree with the Examiner's
10 characterization of the teaching of Berger, namely in her characterization that Berger teaches detecting the partial movement of the control element from the initial condition.

Berger discloses a method of detecting at least one predetermined shift position of a vehicle transmission. Berger has therefore nothing to do with a test
15 operating safety of a process control device comprising a process valve driven by a pneumatic actuator. Berger also fails to teach or suggest a partial movement of the process valve which movement is to be controlled by that control unit that controls the shutdown action of the process valve and further fails to teach or suggest a partial movement of the process valve to test its operating safety.

20 In addition to not including the missing structural features, as mentioned above, one of ordinary skill in the art would not combined references from these completely different technical fields, namely art from the field of faucets for mixing warm water with art from the field of gear transmissions of a car. The object of the invention is to provide an improved test operating safety method for
25 a process valve designed to close/open a process valve of a process system in the event of an incident

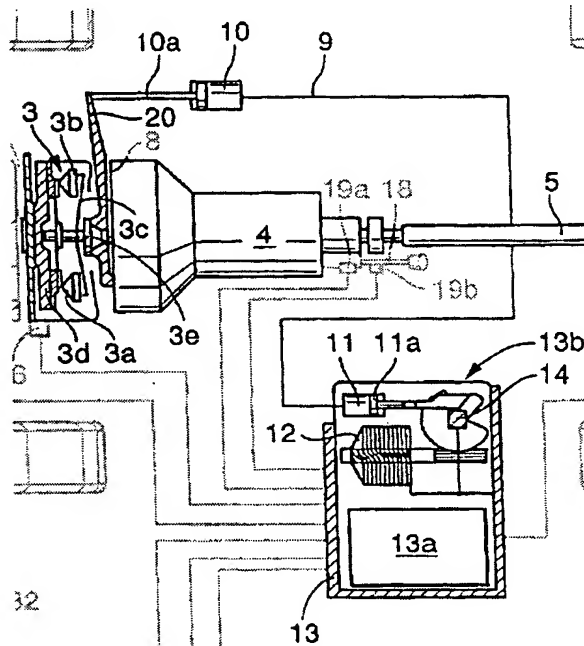
“Shut down” valves come into operation only in the case of such an incident. Therefore, in the normal operation, the shut down valve is in a rest position because of which it is necessary to check its operation capability by way of a test that assures that the process control device can fulfill the intended
5 protect function for the process system. The present invention provides an improved test method and an improved process system allowing the inventive test method. Therefore, one of ordinary skill in the art would not consider combining Berger in view of the teachings of Garvey.

Furthermore, while Applicants do not disagree with the Examiner's
10 characterization that Berger teaches the detection of partial movement, it is clear that the partial movement relates to the actuator itself, and not the control element. With regard to the sensor, Berger states (15/31-44):

15 The movement of the output element of the actuator, i.e., of the piston 11a of the master cylinder 11, is detected by a clutch travel sensor 14 which senses a position, or the speed or acceleration of a change in position, of an element whose displacement, speed or acceleration is in direct proportion to the displacement, speed or acceleration of the clutch.
20 The master cylinder 11 is connected through a pressure conduit 9, normally a hydraulic line, to the slave cylinder 10. The output element 10a of the slave cylinder is coupled to the release lever or release element 20. Thus, a movement of the output element
25 10a of the slave cylinder 10 causes the release element 20 to be moved or tilted to effect a controlled variation of the amount of torque that is transmitted by the clutch 3.

Although Berger indicates that the clutch travel sensor 14 senses a
30 position... of an element whose displacement... is in direct proportion to the displacement... of the clutch, this is only partially true in a general sense for this

clutch application, and is not true in the operational safety context of the present invention. What Berger illustrates in Figure 1 (relevant portions highlighted below) is that the sensor 14 detects displacement of the actuator 11a, and not the control element (release lever/element 20).



If everything is working properly, then there should be a correspondence between the position of the master cylinder (actuator) 11, the slave cylinder (actuator) 10, and ultimately, the release lever (control element) 20.

10 However, in the context of a safety environment, it is the very possibility that things may not be working properly that serves as the system focus. In Berger, any one of the following problems could occur that would not result in a correspondence between the control element and the element whose position the sensor detects: a breakdown in the piston 11a of the master cylinder 11, a
 15 loss of air/fluid in the cylinder 11, a breakdown in the line 9 between the master

11 and slave 10 cylinder, and a breakdown in the piston/rod 10a. In any of these scenarios, there would not be a correspondence between the position of the release lever 20 and what is detected by the sensor, and the sensor would fail to detect the very thing that it is designed to according to the present invention.

5 Stated more succinctly, Berger does not allow the detection of the control element/process valve in a safety testing environment because it cannot detect a path failure, which is a fundamental concept of the present invention.

**35 U.S.C. §103(a), CLAIMS 13 AND 14 OBVIOUSNESS OVER GARVEY IN VIEW OF
BERGER, ROSENBERG AND SCHEIDLER**

10 2. *Applicants rely on the arguments above with respect to the independent claims in the application, and note that the addition of Rosenberg and Scheidler (cited for other reasons by the Examiner), do not further serve to obviate the independent claims.*

Without addressing the Rosenberg and Scheideler on their merits,
15 Applicants respectfully assert that the addition of Rosenberg and Scheidler to the combination of references does not render the combination as obviating, since the combination fails to teach or suggest all of the elements of the independent claims in the present application.

For these reasons, Applicants assert that the claim language of the
20 independent claims clearly distinguishes over the prior art, and respectfully request that the Examiner withdraw the §103(a) rejection from the present application.

CONCLUSION

Inasmuch as each of the objections have been overcome by the amendments, and all of the Examiner's suggestions and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be withdrawn and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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